

(e) a polypeptide of any one of (a) to (d) which has been modified by conservative amino acid substitution without loss of immunogenicity, wherein said modified polypeptide is at least 75% identical in amino acid sequence to the corresponding polypeptide of any one of (a) to (d); wherein the nucleic acid molecule is either operatively linked to one or more control sequences for expression of the polypeptide in a mammalian cell, or is integrated and expressed in a bacterial cell suitable for use as a vaccine vector; and wherein the vaccine optionally comprises an additional nucleic acid encoding an additional polypeptide which enhances the immune response to the polypeptide selected from any one of (a) to (d) above.

9. (Amended) The vaccine of claim 8 wherein the additional polypeptide is a *Chlamydia* polypeptide.

10. (Amended) A pharmaceutical composition comprising a pharmaceutically acceptable carrier or diluent suitable for use in a vaccine and a nucleic acid molecule which encodes a polypeptide selected from any one of:

- (a) SEQ ID No. 2;
- (b) SEQ ID No. 4;
- (c) SEQ ID No. 6;
- (d) an immunogenic fragment comprising at least 12 consecutive amino acids from the polypeptide of (a); and
- (e) a polypeptide of any one of (a) to (d) which has been modified by conservative amino acid substitution without loss of immunogenicity; wherein said modified polypeptide is at least 75% identical in amino acid sequence to the corresponding polypeptide of any one of (a) to (d); wherein the nucleic acid molecule is operatively linked to one or more control sequences for expression of the polypeptide in a mammalian cell.

11. (Amended) The vaccine according to claim 8 further comprising a pharmaceutically acceptable carrier.

26. (Amended) A method for preventing or treating *Chlamydia* infection comprising the step of administering an effective amount of a nucleic acid molecule which encodes a polypeptide selected from any one of:

- (a) SEQ ID No. 2;
- (b) SEQ ID No. 4;
- (c) SEQ ID No. 6;
- (d) an immunogenic fragment comprising at least 12 consecutive amino acids from the polypeptide of (a); and
- (e) a polypeptide of any one of (a) to (d) which has been modified by conservative amino acid substitution without loss of immunogenicity, wherein said modified polypeptide is at least 75% identical in amino acid sequence to the corresponding polypeptide of any one of (a) to (d); wherein the nucleic acid molecule is operatively linked to one or more control sequences for expression of the polypeptide.